DISCUSSION OF THE CLAIMS

Support for amended Claim 3 is found at specification page 8, lines 24-36.

No new matter has been added.

REMARKS/ARGUMENTS

Applicants thank Examiner Velasquez for the interview conducted on July 25, 2011 and the suggestions provided during the interview.

The rejection of Claims 3, 4, 5, 7, 8 and 13 under 35 U.S.C. 103(a) as being unpatentable over Guelton et al (US 6,358,338) in view of Kim et al (WO 93/13233) and in further view of Ferguson ("Design for Deformation Processes," Vol. 20, ASM Hanbooks Online) is traversed.

US'338 discloses a steel strip having Al $\leq$ 6%. However, US'338 does not disclose an alloy having Al $\leq$ 0.050% obtained by a process comprising hot rolling at an end-of-rolling temperature of 890°C or higher wherein precipitation of AlN is prevented as in amended Claim 3. As to the AlN effect, Applicants disclose as follows. *See* specification page 8, lines 24-36, emphasis added.

> Aluminum is a particularly effective element for the deoxidation of steel. Like carbon, it increases the stacking fault energy. However, aluminum is a drawback if it is present in excess in steels having a high manganese content. This is because manganese increases the solubility of nitrogen in liquid iron, and if an excessively large amount of aluminum is present in the steel the nitrogen, which combines with aluminum, precipitates in the form of aluminum nitrides that impede the migration of grain boundaries during hot transformation and very appreciably increases the risk of cracks appearing. An Al content of 0.050 % or less prevents the precipitation of AlN.

As disclosed above, Applicants have found that AlN precipitates increase a risk of cracking during hot deformation and that hot deforming at an end-of-rolling temperature of 890°C or

higher together with limiting Al content up to 0.05% prevents forming AlN precipitates. US'338 does not disclose or recognize such teachings. To cure the deficiencies of US'338, the Office has combined US'338 and WO'233. WO'233 discloses an austenitic high manganese steel. However, WO'233 does not disclose or suggest an alloy having Al ≤ 0.050% obtained by a process comprising hot rolling at an end-of-rolling temperature of 890°C or higher wherein precipitation of AlN is prevented as in amended Claim 3.

In particular, as to the Al content, WO'233 discloses as follows. *See* WO'233, page 7, emphasis added.

> The aluminum (Al) like the carbon heightens the stacking fault energy to stabilize the austenite phase, and does not form ϵ-martensites even under a severe deformation such as cold rolling, but contributes to forming twins. Thus the aluminum is an important element for improving the cold workability and press formability. However, if its content is less than 0.1%, ϵ-martensites are formed to deteriorate the elongation, although its strengths are reinforced, with the result that cold workability and press formability are deteriorated. Meanwhile, if its content exceeds 6.0%, the stacking fault energy is too much augmented, so that a slip deformation occurs due to a perfect dislocation. Therefore, the content of aluminum should be desirably 0.1-6.0%.

As disclosed above, WO'233 clearly teaches away from having Al less than 0.1 wt%. Thus, the combined teachings of US'338 and WO'233 do not disclose or suggest an alloy having Al ≤ 0.050% obtained by a process comprising hot rolling at an end-of-rolling temperature of 890°C or higher wherein precipitation of AlN is prevented as in amended Claim 3. The secondary reference to Ferguson does not cure the deficiencies of US'338 and WO'233. Ferguson simply discloses a metal hot working process. However, Ferguson does not disclose

or suggest an alloy having Al ≤ 0.050% obtained by a process comprising hot rolling at an end-of-rolling temperature of 890°C or higher wherein precipitation of AlN is prevented as in amended Claim 3. Thus, even the combined teachings of US'338, WO'233 and Ferguson do not render obvious amended Claim 3 and the dependent claims therefrom.

Withdrawal of the rejection is respectfully requested.

The rejection of Claims 3, 4, 5, 7, 8 and 13 under 35 U.S.C. 103(a) as being unpatentable over Guelton et al (US 6,358,338) in view of Hoffmann et al (US 2003/014911) and in further view of Ferguson ("Design for Deformation Processes," Vol. 20, ASM Hanbooks Online) is traversed.

As discussed above, US'338 does not render obvious amended Claim 3 and the dependent claims therefrom. The secondary reference to US'911 does not cure the deficiencies of US'338. US'911 discloses a steel strip. However, US'911 does not disclose or suggest an alloy having Al ≤ 0.050% obtained by a process comprising hot rolling at an end-of-rolling temperature of 890°C or higher wherein precipitation of AlN is prevented as in amended Claim 3. In fact, as to the Al content, US'911 requires Al of 1 to 10 wt%. *See* US'911, Claim 1. As discussed above, Ferguson does not disclose or suggest an alloy having Al ≤ 0.050% obtained by a process comprising hot rolling at an end-of-rolling temperature of 890°C or higher wherein precipitation of AlN is prevented as in amended Claim 3. Thus, even the combined teachings of US'338, US'911 and Ferguson do not render obvious amended Claim 3 and the dependent claims therefrom.

Withdrawal of the rejection is respectfully requested.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal allowance. An early and favorable action is therefore respectfully requested.

Respectfully submitted,

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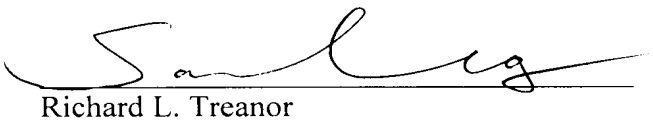
MAIER & NEUSTADT, L.L.P.



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